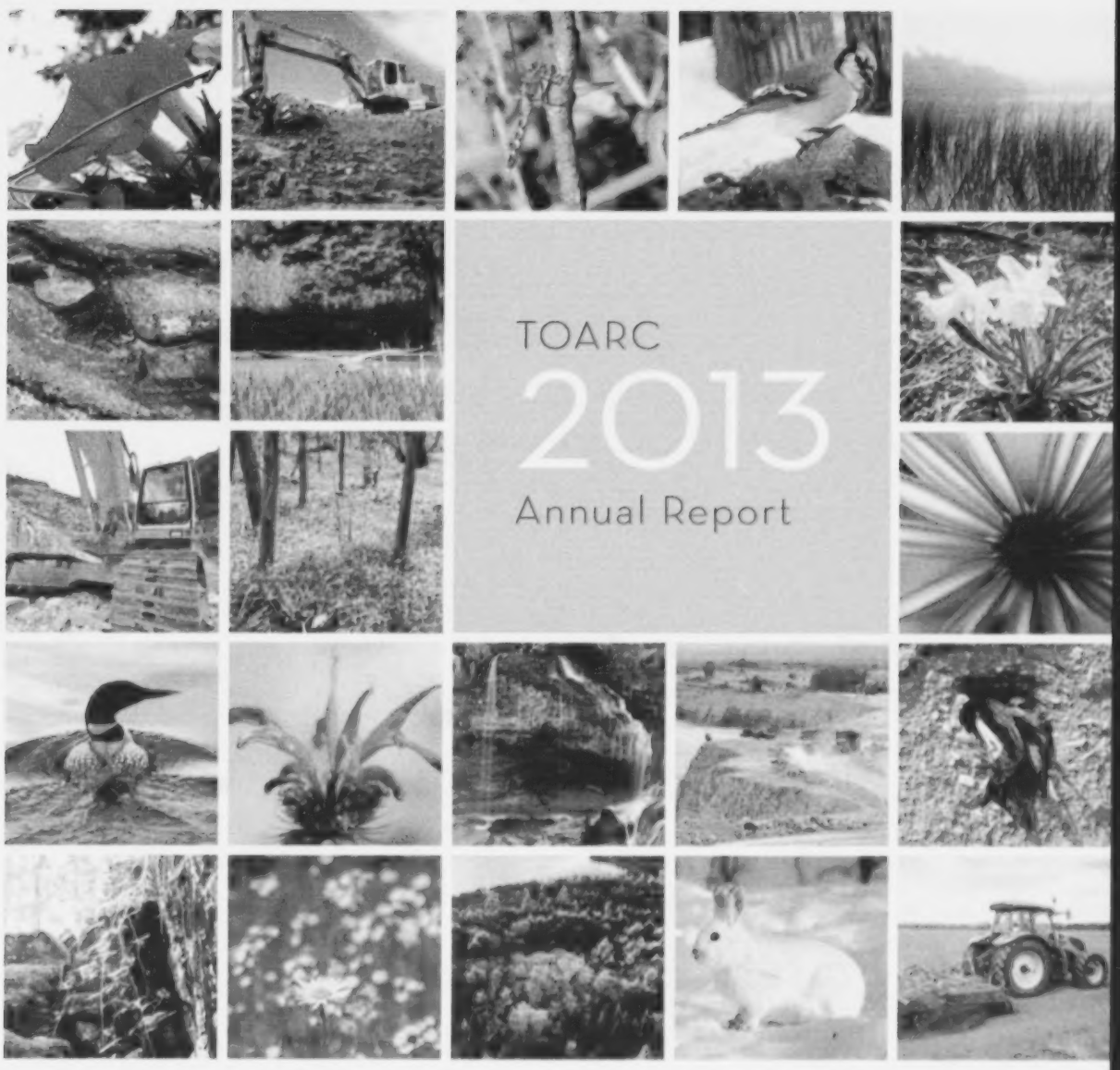

TOARC 2013 Annual Report

REHABILITATING LEGACY PITS AND QUARRIES

Board of Directors

2013

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Marolyn Morrison

REPRESENTING THE AGGREGATE INDUSTRY AT LARGE (NON OSSGA)

Gord Lavis

REPRESENTING THE MINISTRY OF NATURAL RESOURCES AS AN "EX OFFICIO MEMBER"

Dan Marinigh

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Gord Lavis

REPRESENTING THE MINISTRY OF NATURAL RESOURCES (MNR) AS AN "EX OFFICIO MEMBER"

Dan Marinigh

June 29, 2014

Honourable Bill Mauro
Minister of Natural Resources
Suite 6630, 6th Floor, Whitney Block
99 Wellesley Street West
Toronto, Ontario M7A 1W3

Minister Mauro:

On behalf of the Board of Directors, I am pleased to submit the 2013 Annual Report of The Ontario Aggregate Resources Corporation.

This annual report includes audited financial statements for the Aggregate Resources Trust and The Ontario Aggregate Resources Corporation for the fiscal year ended December 31, 2013. Included within the financial statements for the Aggregate Resources Trust is a schedule of rehabilitation costs for projects completed by the Management of Abandoned Aggregate Properties (MAAP) program in 2013. The report also reviews a number of the many rehabilitation research and other initiatives being funded, as well as their application to creative rehabilitation solutions.

Yours truly,

Ken Lucyshyn
Chairman of the Board

2013 Chairman's Message

AGGREGATE PRODUCTION FROM LICENCED SOURCES WAS DOWN AGAIN IN 2012 (COMPARED TO 2011) BY APPROXIMATELY 5 MILLION TONNES TO 139 MILLION TONNES. THIS AMOUNT MATCHES THE PREVIOUS LOW (RECORDED IN 2009) FOR THE PAST 15 YEARS:

This resulted in a reduction of approximately $0.5 million in licence fees being collected in 2013. The total fees of $19.1 million (compared to $19.6 million prior year) was disbursed amongst designated recipients as follows:

	($ MILLION)
Local Municipalities	8.7
Counties & Regions	2.1
MAAP Program	0.7
Province (from licence fees)	5.1
Province (from royalties and permit fees)	2.5
Total	**19.1**

As a result of the lower production tonnage in the province, the associated funding to the MAAP Program at $0.005/tonne was reduced proportionally. As stated in previous reports, this rate has not changed since the inception of the program in 1990 despite the effects of inflationary pressures over 24 years. This combined with the issue of the lowest production tonnage reported in the past 15 years continues to challenge staff to do more with less.

In 2013, the MAAP program conducted work on 28 sites at a cost of over $450,000. This was the highest level of spending since 2007 and confirms the boards commitment to complete the rehabilitation of legacy pits and quarries in the province as soon as possible. The work consisted of 15 sites in Wellington County, 12 sites in the Region of Durham and 1 site in Essex County.

These projects coupled with the ongoing efforts of re-evaluating the older inventories increased the number of closed files by almost 500 this past year which now stands as follows:

Developed	536
Licensed	225
No Historical extraction	319*
Naturalized (to create new habitat)	1,409
Rehabilitated (by owner)	499
Situated on Crown Land	136
Landowner Not Interested	619
Rehabilitated by MAAP/MNR	421
Total Files Closed	**4,164**

* Files where no disturbances could be found or where it was determined the site disturbance was not a result of aggregate extraction.

With a total file count at present of 7,987 legacy sites in our database (eMAAP) and 4,164 files now closed, there still remains over 3800 files that need to be dealt with and an expectation that approximately 3000 of those sites will require rehabilitation efforts by the MAAP staff.

Research as well as education, training, publishing and dissemination of information on aggregate resource management including rehabilitation, are defined as "Trust Purposes". With this in mind the Board continues to support many ongoing research initiatives such as Dr. Paul Richardson's (Post-Doctoral Fellowship) Afforested Environment Study and Caroline Dykstra's (MAAP employee) work on former aggregate extraction sites returning to agriculture. More detail on these initiatives is presented elsewhere in this report. We are also pleased to announce that research on *Tallgrass Prairie created on Former Sand Pits* by Brian Ohsowski (PhD candidate) and *Establishing Alvar Mosses on Quarry Floors* by Suzanne Campeau have now been completed. The full reports can be found on TOARC's website at **http://www.toarc.com/research/publications.html.**

As part of our efforts to publish and disseminate information on aggregate resources, the Board approved funding this year for the development of a new interactive website tool called MORT (MAAP On-Line Reporting Tool). MORT will allow for easy access of the status of legacy pits and quarries in the province by geographic location, while protecting landowner information. The public will also be able to view images of the sites in their current condition, whether they have been rehabilitated by the MAAP program or naturalized to a wetland complex or meadow. This tool is now operational and can be accessed at **http://www.toarc.com/mort/index.html.**

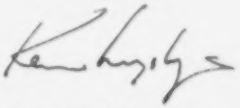
Trust funds increased in the year ending 2013 to $19,516,607 from $17,311,924 at the yearend 2012. The trust saw significant gains in both the "realized portion" of the portfolio and the "unrealized changes in fair value portion". Total revenue increased by $1,504,515 to $4,177,237 and drove the trust to its highest level since 2007 when it ended the year at $18,095,748. These gains are driven mainly as a result of the recovery of investment markets in North America. Expenses increased by $21,349 driven mainly by increased consulting expenses.

I want to take this opportunity to thank David Sterrett who retired at the end of August 2013 after nearly 15 years as President. David was instrumental in hiring the people and implementing the structure and processes that ensured that this newly formed corporation met its obligations and succeeded in its role as Trustee to the Aggregate Resources Trust.

As well, I am pleased that Bruce Semkowski, a former industry leader, OSSGA Chairman and past TOARC board member has agreed to take on the position as President. Bruce is a civil engineer with more than 30 years' experience working in the aggregates and construction industries and brings excellent skills and knowledge to the important work our corporation does in disbursing funds collected from aggregate companies for the betterment of Ontarians.

Finally, I want to welcome John Moroz of CBM Aggregates and Ed Persico of Dufferin Aggregates to the TOARC board of directors. John and Ed are replacing Bruce Semkowski and Greg Sweetnam of James Dick Aggregates as the OSSGA representatives. We wish to thank Greg who is a past Chairman of TOARC for all his contributions.

Respectfully submitted,



Ken Lucyshyn
Chairman of the Board

AGGREGATE RESOURCES TRUST

2013 MAAP PROJECT SUMMARY

PROJECT NUMBER	LANDOWNER	LOCATION	REHABILITATION END USE	AREA (ha)	COST ($)
13-01	Timmings Pit	Wellington County	Agriculture	4.16	62,533
13-02A	Zelasko Pit	Wellington County	Agriculture	2.10	19,807
13-02B	Hartung Pit	Wellington County	Agriculture	5.00	57,010
13-03A	Weber Pit	Wellington County	Agriculture	1.10	13,539
13-03B	GRCA Redstone Pit	Wellington County	Natural Area	0.28	3,645
13-03C	GRCA Ariss Pit	Wellington County	Natural Area	0.78	3,507
13-03D	Bowier Pit	Wellington County	Agriculture	1.90	34,585
13-04	Arnold Pit	Wellington County	Natural Area	4.80	38,086
13-05A	G. Martin Pit	Wellington County	Pasture	2.10	13,835
13-05B	L. Martin Pit	Wellington County	Agriculture	1.24	11,226
13-05C	Sherman Pit	Wellington County	Agriculture	2.10	21,725
13-06A	Hessels Pit	Wellington County	Agriculture	0.55	6,400
13-06B	GRCA Neumann Pit	Wellington County	Natural Area	0.85	11,419
13-06C	Brohman Pit	Wellington County	Agriculture	0.36	5,940
13-06D	J. Martin Pit	Wellington County	Pasture	0.40	12,350
13-07	Windsor Feminist Theatre Quarry	County of Essex	Recreational	0.25	8,916
13-08	Guy Pit	Durham County	Pasture	5.00	24,673
13-09A	Senn Pit	Durham County	Pasture	1.00	7,373
13-09B	Swindells Pit	Durham County	Pasture	1.27	11,673
13-09C	LeBlanc Pit	Durham County	Agriculture	1.46	13,673
13-10A	Warriner Pit	Durham County	Agriculture	0.55	5,506
13-10B	Piney Pit	Durham County	Natural Area	0.10	8,693
13-10C	Coxworth Pit	Durham County	Natural Area	0.30	7,433
13-10D	Ross Pit	Durham County	Agriculture	0.38	7,814
13-11A	Kemp Pit	Durham County	Pasture	0.50	5,673
13-11B	Davidson Pit	Durham County	Agriculture	1.25	10,173
13-11C	Woodley Pit	Durham County	Pasture	0.35	8,400
13-12	Halminem Pit	Durham County	Pasture	4.00	22,428
				44.13	458,035

* Total project costs incurred for 2013 were $475,076. The difference between the $458,035 shown and the total was monies spent on 1 project carried over from 2011 and 6 projects carried over from 2012 (mainly seeding and tree planting)

AGGREGATE RESOURCES TRUST

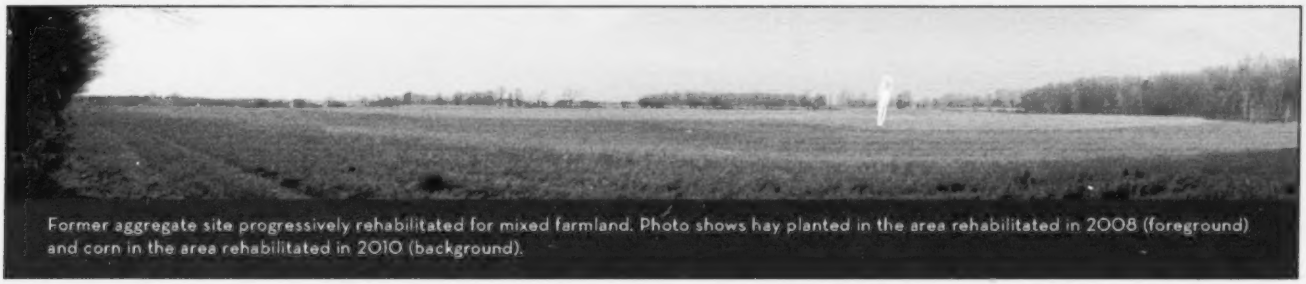
2013 Summary of Maap Rehabilitation Costs

YEAR	NUMBER OF NEW SITES	AREA REHABILITATED (ha)	TOTAL COSTS** ($)	COST/(ha) ($)	AVG COST PER SITE ($)	AVG AREA REHABILITATED (ha)
1992-96*	52	77.99	726,480	9,315	13,971	1.50
1997	15	22.40	497,973	22,231	33,198	1.49
1998	10	18.35	219,199	11,945	21,920	1.84
1999	16	30.45	366,636	12,041	22,915	1.90
2000	17	28.50	411,226	14,429	24,190	1.68
2001	21	25.50	320,337	12,562	15,254	1.21
2002	10	14.25	288,844	20,270	28,884	1.43
2003	19	46.39	342,897	7,392	18,047	2.44
2004	15	27.35	414,986	15,173	27,666	1.82
2005	28	75.45	498,819	6,611	17,815	2.69
2006	28	48.50	510,556	10,527	18,234	1.73
2007	23	39.11	740,796	18,941	32,209	1.70
2008	29	45.10	482,875	10,707	16,651	1.56
2009	19	22.29	298,699	13,401	15,721	1.17
2010	19	21.35	298,205	13,967	15,695	1.12
2011	38	34.40	274,436	7,978	7,222	0.91
2012	30	38.10	444,222	11,659	14,807	1.27
2013	28	44.13	458,035	10,379	16,358	1.58
Total	**417**	**659.61**	**7,595,221**	**11,515**	**18,214**	**1.58**

* 1992-1996 data is based on information provided by MNR

** Total Costs have been restated (except for MNR contracts) to conform with the Trust's revised financial statement presentation

From Aggregates to Agriculture



Former aggregate site progressively rehabilitated for mixed farmland. Photo shows hay planted in the area rehabilitated in 2008 (foreground) and corn in the area rehabilitated in 2010 (background).

What is the status of agricultural rehabilitation of aggregate extraction sites in Ontario?

Farmland is an important natural resource in Ontario, where, according to the Canada Land Inventory, more than 56% of the Class 1 farmland in Canada can be found. Rehabilitation of aggregate extraction sites to agriculture is one way in which the aggregate industry has been addressing questions of farmland conservation in Ontario. However, up-to-date information on the current status of agricultural rehabilitation is minimal. Since a 1982 report (Mackintosh and Mozuraitus), little information has been collected and collated regarding the state and extent of former aggregate sites returned to agricultural use. Recent recommendations from the 2009 State of the Resource Study (SAROS, Skelton Brumwell & Associates Inc. and Savanta Inc.) and the 2013 Review of the Aggregate Resource Act both highlighted agricultural rehabilitation as an area requiring more research. In response, The Ontario Aggregate Resources Corporation (TOARC) began focusing on the collection of information on the location, management practices and physical characteristics of aggregate sites that had been rehabilitated to agriculture post-extraction.

In 2013 a database of sites was compiled to determine how many aggregate sites have been returned to agriculture, how many hectares the rehabilitation encompasses, the exact locations of the sites and some physical characteristics of the sites.

How was information collected?

The database integrated information on surrendered, progressively rehabilitated and legacy pits from a number of sources including the TOARC eMAAP database, the Ontario Ministry of Transportation (MTO), the OSSGA study of end-use, the MNR ALPS database, MNR surrender files and information from individual landowners and property managers. This resulted in a database of over 1700 aggregate sites.

Sites were examined using aerial photography and satellite imagery. Conclusions on end use were possible for many sites where there was a clear indication of no agricultural activity (e.g. large ponds, forested areas, residential developments), the remainder required field verification.

Sites east of Frontenac were not visited in 2013, due to time and personnel constraints, but will be visited in 2014. The study area did not include the counties of Muskoka, Haliburton, or areas north because it was anticipated that little agriculture production would be occurring. For each site where agriculture was confirmed or possible, landowners were contacted. Site surveys and questionnaires were completed with the permission of the landowner. Surveys and questionnaires encompassed a range of information including; contact information, site history and rehabilitation, current management practices, and land physical characteristics.

What did MAAP find in 2013?

TABLE ONE:
shows the number of sites that were included in the database and the current status of those sites.

TABLE ONE | Number of aggregate sites assessed and sites outstanding in the agricultural database.

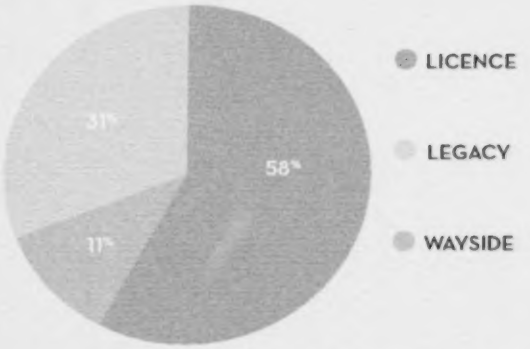
CATEGORY	NUMBER OF SITES
Total Number of Sites in Database	**1729**
Outstanding Sites	**317**
Total Number of Sites Assessed	**1412**
Aerial Imagery Assessed - No Agriculture	526
Field Assessments	886
Closed - No Agriculture	388
Attempts*	320
Complete**	114
Incomplete***	64

* 'attempts' refers to sites where landowners were not successfully contacted and the exact location of the site could not be ascertained

** 'complete' refers to sites where landowners were successfully contacted and a site visit was carried out.

*** 'incomplete' refers to sites where landowners were not successfully contacted, or landowners were contacted but a site visit was not carried out

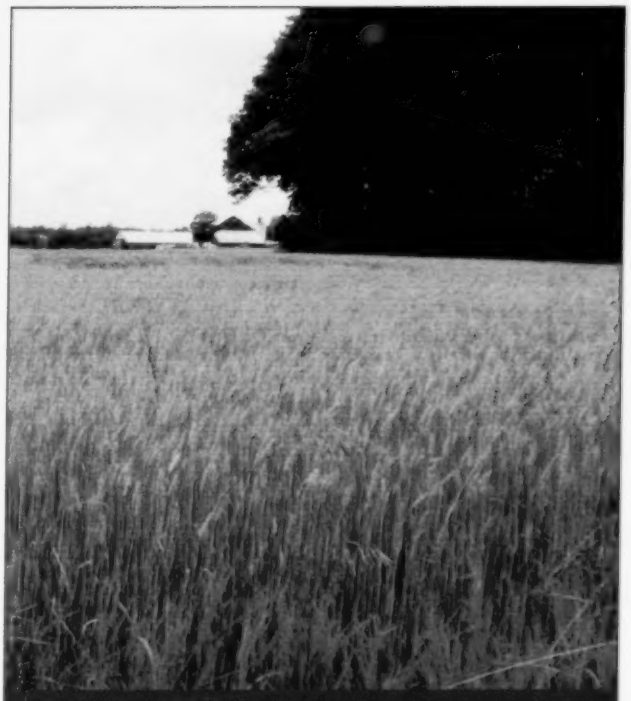
FIGURE ONE | Licence types of surveyed sites rehabilitated to agriculture.



The 178 surveyed sites represented a total of 1086 ha of surrendered, progressively rehabilitated or legacy land rehabilitated to agriculture (Figure 1). Twenty-three percent of the sites were mixed land uses, where sites had small areas consisting of side slopes or wet spots that could not be returned to agriculture. The sites include agricultural rehabilitation spanning from the 1960's to present, with most of the rehabilitation to agriculture occurring after 1990.

The type of agricultural land was 44% field crops (annual crops such as corn, grain and soybeans). Pasture (39%) represented areas where livestock was grazed and often was a permanent use due to physical constraints of these sites. Hay, which was defined in this study as grasses and/or legumes which were cut for animal feed, made up only 14% of the sites assessed. The other (3%) category consisted of orchards, vineyards and fallow lands.

The above legacy pit had severely degraded soil and after careful examination of the soil conditions surrounding the site it was determined that there were sufficient soils from the surrounding field to 'share' with the regraded extraction site. Here the site has just had hay harvested 6 years after rehabilitation.



A wheat crop growing in Grey County occurs on a site that was extracted for 12 years and rehabilitated to agriculture in 1983.

What about physical parameters?

Some physical characteristics of the sites were measured during the field surveys. **Table 2** shows the average values for slope steepness and height, stoniness, stone size, and soil texture. Sites with slopes 3:1 or steeper were usually unimproved pastures where the use of machinery was not necessary. Stoniness, which is a common problem in rehabilitated gravel pits, was estimated using five random quadrats measuring 1 m x 1 m at each surveyed site to give an estimate of the percentage of ground covered by stones. Management of rehabilitated farmland often involves stonepicking to reduce the stones at the surface of these naturally stony soils (SAROS, 2009). Soil texture was also assessed at three random locations across each inventoried site. Soil texture varied between sites as well as within sites, however the most common soil type found at rehabilitated sand and gravel extraction sites was sandy loam.

Topsoil was removed or sold from many of the sites where extraction took place prior to 1990. Twenty-seven of the sites surveyed reported bringing in fill for rehabilitation, for grading or to replace topsoil that had been removed. Based on communication with landowners, three of the sites which reported the use of fill used construction waste. The remaining 90% of the sites used topsoil or subsoil received from nearby construction projects, ditches or bought from local suppliers.

An aggregate extraction site for 10 years, this site in Grey County was rehabilitated in 1980 and now produces hay.

A vibrant crop of corn is growing on a site that was used for aggregate extraction from the 1930's and surrendered in the early 1990's.

TABLE TWO | Average values for physical characteristics of aggregate extraction sites returned to agricultural land.

PHYSICAL CHARACTERISTIC	AVERAGE VALUE
Slope Steepness (run:rise)	3:1 or <3:1
Slope Height (m)	1-3 m
Stoniness (% ground cover)	<10%
Stone Size (diameter in cm)	<15 cm
Soil Texture	sandy loam

What was the perception of rehabilitation? Land management?

Farmers were asked to rate (on a scale of one to ten) the overall quality of the land that had been rehabilitated and its use for agriculture, one being the poorest quality, ten being the highest. Sixty-six percent of farmers rated the land above a five, while 34% rated their land quality as less than five.

While only 8% of the farmers surveyed rated the rehabilitated land as a 10, many farmers were optimistic that the land was improving and would become more productive over time. A few farmers were less positive, suggesting their land had been irreparably damaged by poor rehabilitation.

Land management is important to soil and crop quality post rehabilitation. Cover crops and soil amendments are two ways in which farmers can increase the soil quality and thereby have a positive effect on crop yield. In this study, cover crops are considered crops that are grown for the protection and improvement of the soil. In 24 of the 26 counties surveyed, farmers who used cover crops were more likely to rate their land above 5 then those who did not.

Soil amendments can improve the chemical and physical properties of soils by increasing nutrients, adding soil organic matter, and altering soil pH. In this study the most common soil amendments used were farmyard manure, composted hay and lime. Farmers who used soil amendments were more likely to rate their rehabilitated land above 5 than farmers who did not use them.

Where should we go from here?

The preliminary results shown here suggest that documented rehabilitation of aggregate extraction sites to agricultural use has been occurring since the 1970's; that the rehabilitation encompasses a large range of cropping systems and that farmer satisfaction varies greatly. In order to better understand the differences in these sites and farmer satisfaction, a quantitative research project looking at crop productivity and soil quality at a subset of sites will be undertaken in 2014. Work will be completed to fill in the gap in the eastern portion of the province which will better represent Ontario's post-aggregate agricultural rehabilitation. In addition, a list of management recommendations to update the Mackintosh and Mozuraitus (1982) study will be inferred.

Replacing the Forests, Despite the Trees?

FIGURE ONE | **Phytometer species employed, in their native hardwood forest habitat. The plants displaying white flowers/buds correspond to wild leek (*Allium tricoccum*) while the deeply-cleft heart-shaped leaves correspond to wild ginger (*Asarum canadense*).**

When it comes to mitigating impacts of resource extraction, it can literally be difficult to see the forest through the trees. The science of growing trees is well-developed, but we have yet to master replacement of many other aspects of forest ecosystems, of equal or even greater import than the trees. Ontario's heritage hardwood forests provide critical habitat to thousands of species, most of which are not trees. Ranging from animals (insects, herptiles, birds, mammals) to plants (mosses, ferns, grasses, wildflowers, shrubs) to fungus and bacteria, many species can only live successfully under complex sets of environmental conditions unique to forests. Many factors interact to create these habitats, from low light and rolling topography to diverse decaying stumps, fallen logs, and standing dead trees. However, knowing which factors are important, and how to recreate these in new forests, is a complex and difficult task.

Afforestation is the creation of new forests, most commonly by mass tree-planting on former farmland. This offers hope for off-site replacement of natural woodlands where direct restoration is impossible, such as where mining proceeds below the water table. Unfortunately, the difficulty of capturing many important ecological features of mature natural forests challenges the sustainability of the aggregates industry, which seeks to fully mitigate all biodiversity and ecosystem impacts that cannot be avoided. This was the impetus behind the Afforested Environments Study (AES), now in its fourth and final year, under the management of Dr. Paul J. Richardson and Professor Stephen Murphy at the University of Waterloo (with funding assistance from TOARC and Mitacs).

The challenge

Large-scale afforestation has primarily been carried out by planting only one or a few tree species – at high-density and regular-spacing – corresponding mainly to quick-growing softwoods historically uncommon in the hardwood forests dominating southern Ontario (e.g. red pine). Do these unnatural conditions stop plantation forests from eventually resembling the mature hardwood forests requiring replacement? Or does such management actually promote emergence of target features, due to complementary effects of planting and thinning combined? Planted trees may have negative impacts, but at the same time their rapid growth can quickly generate shade conditions needed for good understorey development. Meanwhile, gradual removal of virtually every planted tree may minimize or reverse the negative impacts – for example, by releasing native trees from competition – provided that the pacing complements natural regeneration processes. While some studies suggest this positive outcome is possible, others say it is not, and discovering the truth is difficult primarily because of the long timescale of forest development (i.e. ranging from decades to centuries). Careful forest-planting experiments may reveal all in time, but clearly we cannot afford to wait 100 years to learn whether an attempted forest replacement was successful!

An innovative solution

Fortunately, a solution may lie with the chronosequence approach. This is an investigative strategy based on comparing distinct locations which are similar in all regards other than the amount of

time passed since an event of interest – in this case, forest-planting. This approach can be very effective at capturing in the short-term events that play-out over the long-term, such as the lifespan of trees. Chronosequences are limited when it comes to investigating patterns of spontaneous regeneration. However, because they cannot distinguish whether species absent from a given site found the environment too harsh or simply have not yet had time to immigrate naturally. It is also difficult to know what aspects of such sites should be compared to determine relevant changes over time, as a large number of features may vary among sites but only a subset of these is likely to influence the composition or functioning of ecosystems significantly.

Phytometers the "canary"

These problems may be overcome using phytometers, which are sensitive plant species transplanted to test sites and monitored as indicators of habitat similarity to the home ecosystem (i.e. a "canary-in-the-cage approach"). The innovative design of the AES seized this opportunity and combined phytometer and chronosequence approaches. Sites differing in age are being compared with respect to both spontaneous revegetation and their capacities to support experimentally-introduced herb species typical of mature hardwood forests. This enables determination of the timespan and conditions necessary for southern Ontario's heritage hardwood biodiversity to emerge within afforested farmlands. This technique rapidly evaluates the likely success of biodiversity-offsets over long timescales and projects critical time periods where managed relocation of target species to offsets should be most successful. The broad implications are that forest replacement can be more effective, resource companies can legitimately claim likely success, and policymakers and the public will be assured that correct interventions are being implemented to mitigate ecological damage. This triple win points to a powerful approach for reconciling the often-clashing goals of resource extraction and ecological values.

The field experiment

The AES researchers compared 5 mature natural hardwood stands (targets) to 36 softwood-dominated plantations established between 30 and 90 years ago. They evaluated both spontaneously-developing forest features and survivorship of two characteristic understorey herb species – *Allium tricoccum* (wild leek) and *Asarum canadense* (wild ginger) – that were experimentally relocated from target forests to plantations as phytometers (**Fig. 1**). Study sites spanning this age gradient were drawn from a pool of 123 potential sites representing a land base of 40,000 km^2. They were selected at random within each of three tree composition strategies (1 softwood species; 2-4 softwood species; 2-4 softwood and hardwood species) and two stand-thinning regimes (regularly vs. rarely/never thinned). These differences were focussed upon because increasing the diversity of trees planted (including adding hardwoods) and minimizing interference after planting are often-recommended but rarely-tested approaches to improving forest replacement. Time-lags between tree-planting and successful forest replacement can be projected by tracing relationships among tree composition, thinning intensity, and forest development. Strategies for minimizing these time-lags can be deduced because phytometers were introduced experimentally – as bare roots only, or bare roots combined with either sterilized or unsterilized soil from target forests. If poor development of plantation soils prevents accurate forest replacement, phytometers should reveal this by surviving better in younger plantations where "home" soil was added. Relative benefits of adding sterilized versus unsterilized home soil indicates whether deficiencies in living or non-living soil aspects are more important.

FIGURE TWO

The understorey of mature hardwood forests is comprised of many unique and important habitat features, including a diversity of coarse woody debris (i.e. stumps, fallen logs and standing dead trees, from a variety of species and representing various stages of decay).

The importance of physical features

Phytometers were out-planted in autumn 2011 and survivorship was monitored throughout spring 2014. In the 2012 field season, all sites were surveyed for canopy and understorey vegetation as well as soil and microhabitat properties. In 2013, focus shifted to collecting information about habitat features related to small-scale topographic variation of the forest floor (e.g. the frequency and

FIGURE THREE

Some examples of plant (top row) and animal (bottom row) biodiversity finding refuge in the understorey of hardwood forests as well as very mature plantations. Top row, from left to right: moccasin flower (*Cypripedium acaule*); maidenhair fern (*Adiantum pedatum*); sharp-lobed hepatica (*Anemone acutiloba*); shinleaf (*Pyrola elliptica*); squawroot (*Conopholis americana*). Bottom row: West Virginia white butterfly (*Pieris virginiensis*); white-tailed Deer (*Odocoileus virginianus*); Butler's gartersnake (*Thamnophis butleri*); spring peeper (*Pseudacris crucifer*); painted turtle (*Chrysemys picta*).

sizes of pits and mounds) as well as the amount and variety of coarse woody debris, including fallen logs, stumps, and standing dead trees (Fig. 2). In addition to documenting occurrence of such features, aspects of plant biodiversity were recorded in order to draw-out relationships between different features and their relative capacities to provide refuge for biodiversity (e.g. Fig. 3). Although analysis of the 2013 data is still underway, results are expected to highlight how different afforestation strategies (e.g. planting hardwoods vs. conifers only; thinning regularly vs. infrequently) impact development of key habitat features. Importantly, they will also reveal the potential for accelerating forest replacement by manipulating limiting factors, such as importing deadwood from other sites or digging small pits and mounds prior to tree-planting.

Preliminary indications

Plantations experiencing different management histories including year planted, tree species used, and the intensity of stand-thinning exhibited different degrees of similarity to the old-growth hardwood forests taken as targets for ecosystem creation. The specific patterns indicate managers should expect, and will have some capacity to control, several key outcomes of afforestation:

1. Standard forestry approaches to afforestation can yield almost complete replacement of mature hardwood forests, but without intervention the process may take 200 years.
2. Many biologically-relevant ecosystem features can be recovered within 50-150 years if appropriate tree species are selected, stand-thinning is applied, and soil development is facilitated.
3. Incorporating hardwood species in afforestation can accelerate resemblance to targets with respect to the canopy-layer but impede it with respect to the understorey.
4. Periodic removal of selected trees/rows can encourage positive developments including gradual replacement of understorey weeds by desired native herbs.
5. The slowest step in forest maturation – assembly of the understorey community – can be accelerated if managers assist the immigration of herb species from target forests to older plantations (e.g. 80-100 years old).

Details on the results supporting these conclusions can be obtained through TOARC's website or by emailing dr.paul.j.richardson@gmail.com.

Implications

Planting hardwoods alongside conifers may accelerate convergence of the canopy-layer, but softwood monocultures bring the advantage of highly predictable structural changes. Regular stand-thinning appears to help express these changes through increased variability in the environment and reduced competition between planted and desired native species. Planting softwood mixtures resulted in the most rapid convergence of plantations with target forests based on phytometer survival – requiring only 66 years – but only under soil modifications and stand thinning. Accounting for trade-offs between different management practices and goals will be a major challenge to devising optimal afforestation strategies for mitigating biodiversity impacts of aggregate extraction. Maintaining a diversity of afforestation strategies may have the greatest chance of preserving the broadest diversity of forest structures and functions. The most vital impact of the AES, however, is the revelation of the unique power of the combined chronosequence-phytometer approach for investigating over the short-term much longer-term dynamics of biologically-relevant ecosystem features.

Creating Alvar Habitat on Limestone Quarry Floors

REHABILITATING QUARRIES HAS ALWAYS BEEN DIFFICULT DUE TO VERY SHALLOW OR NON-EXISTENT SOILS AND HARSH ENVIRONMENTAL CONDITIONS. HOWEVER, RECENT STUDIES HAVE LED TO DEVELOPMENTS THAT SUGGEST LIMESTONE QUARRIES CAN SUCCESSFULLY BE REHABILITATED TO ALVARS!

What are alvars?

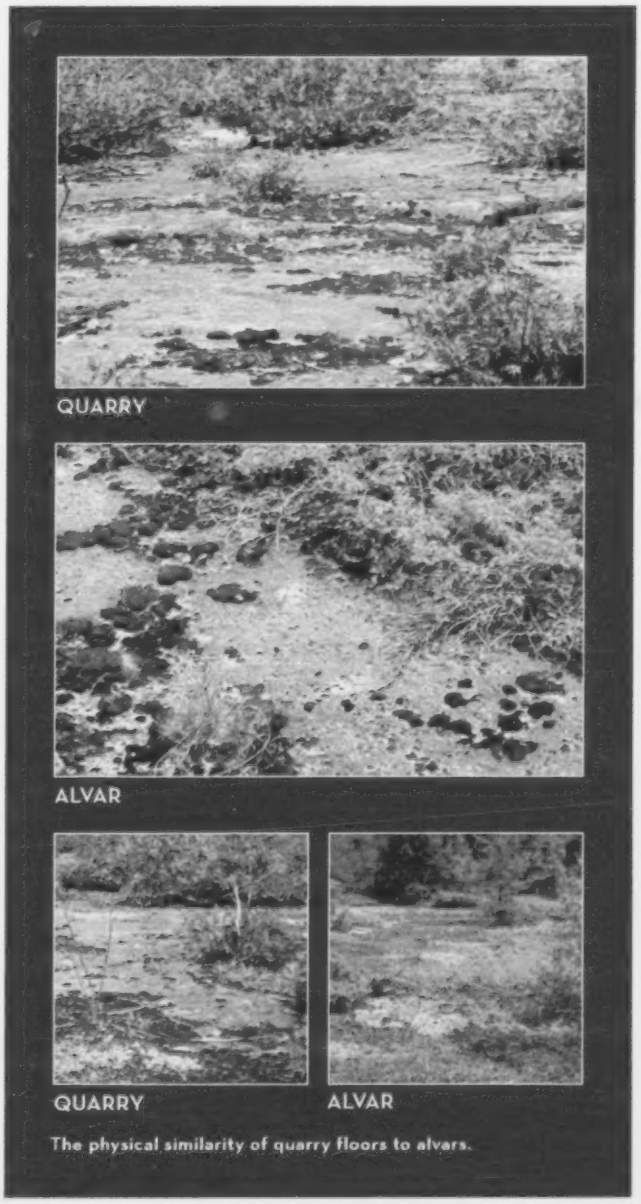
During the last ice age, glaciers retreating across limestone-rich areas around the world scraped patches of land down to the bedrock. Alvars are the ecosystems that developed within these limestone barrens. Alvar vegetation is a unique mixture of stunted trees, herbs, forbs, mosses and lichens (Schaefer 1996). Not all alvars are alike: some are bedrock pavements with almost no soil, others are on thin soil and their vegetation is more grassland or savanna-like (Alvar working Group, 1999). Alvars provide essential habitat to rare animals including birds (e.g. bobolink, eastern loggerhead shrike) and diverse butterfly, dragonfly, and mollusc species.

In 2003 the Cliff Ecology Research Group at the University of Guelph discovered that not only do abandoned quarry floors resemble alvars physically, but over time they became increasingly similar with respect to vegetation too. However, even the oldest quarries only supported about half the number of characteristic alvar species as alvars themselves. This stimulated two field studies aimed at identifying factors constraining the naturalization of quarry floors to alvars, as well as management strategies capable of expediting the process. Based on these studies, relatively simple and inexpensive techniques are now available for effectively rehabilitating quarry floors to alvars.

The "How To" for Creating Alvar Habitat on Quarry Floors

Check the geography!

Almost all of Ontario's alvars occur within the Great Lakes basin on the extensive limestone plains that lie just south of the Canadian Shield. An evaluation of the extracted site should be completed to see if the site is in or reasonably close to areas where alvars existed historically, as environmental conditions and plant populations in these regions would be most suitable for new alvar creation. Created alvars can play important roles in connecting existing natural alvars in these regions. However, alvars may also exist outside their historical range, given that many alvar species are particularly suited to urban environments.



The physical similarity of quarry floors to alvars.

Select appropriate species for introduction

Early successional moss species found to spontaneously colonize both alvars and quarries are highly suitable for the initial stages of revegetating quarry floors. *Tortella tortuosa*, *Schistidium rivulare* and *Syntrichia* ruralis fit this criteria (Larson et al. 2006) and were found to be successful at re-establishing on bare, open quarry floors following experimental introduction (Campeau 2014).

Similar thinking should guide selection of herbaceous species, including the perennial wildflowers which contribute most to the diversity of alvar plant communities. Ideally, introduced species will have natural populations within 15 km of the rehabilitated sites, to support long-term population stability. Attractive and hardy alvar wildflowers which have successfully established following experimental introduction to 30-70 year-old quarry floors include hairy beardtongue, prairie goldenrod, nodding wild onion, harebell, lanceleaf tickseed, cylindric blazing star and black-eyed Susan. Characteristic alvar grasses that have met with similar success include Arctic brome, little bluestem, switchgrass and slender wheatgrass.

Seed and moss sourcing and preparation

Mosses are generally easy to collect but locating large quantities of moss for rehabilitation projects is limiting. In addition, sourcing mosses from valuable ecosystems is not a viable or environmentally acceptable method. Still, a few options do exist. Mosses may be extracted from a donor quarry, a future active quarry or from a nursery that commercially grows mosses on a large scale (e.g. Bryophyta Technologies Inc.). Seeds of herbaceous species are slightly easier to obtain as they can be collected from neighbouring alvar populations, donor quarries or future active quarries without damaging the ecosystem. However, seed material should be collected, processed and cultivated by experienced professionals. Native plant nurseries can provide high quality seeds from ecologically appropriate sources (ex. Pterophylla, Grand Moraine Growers and Grow Wild nurseries). This stage will require extensive planning as collection of seed will need to occur prior to the restoration year.

Plan and prepare the site

While both natural alvars and quarries feature open limestone pavement, alvars tend to be more heterogeneous due to the long history of weathering. The heterogeneity that does present itself on quarry floors must therefore be worked strategically, and in some cases it may be necessary to manufacture appropriate conditions.

Alvar mosses found to readily colonize young quarries as well as alvars (*Tortella sp.* predominant in the photograph).

Patches consistent with different types of alvars should be identified and appropriate vegetation should be targeted to these. Young trees or tree seedlings may be planted in rock fractures or other areas with relatively deep soils. Areas of bare rock should be dedicated to moss colonization and seeded with herbs suited to bare rock and extremely shallow soil. Areas featuring 2-15 cm of soil depth should be prioritized to host diverse mixtures of alvar grasses and wildflower species, as deeper soils tend to become dominated by a few species but shallower soils are easily eroded. Areas with appropriate soil depth may be created by adding or relocating substrates to locations capable of trapping these under high wind or flooding conditions (e.g. pavement patches punctuated by deep cracks, dips in elevation, or rock shelves). Substrate-trapping features may themselves be created if necessary, using rock-breaking machines if available, or simply by rearranging rocks, logs and sticks that can be found at or near the site. A greater diversity of alvar herbs will establish and thrive when a greater variety of soil depths and cover by different substrates is available.

Alvar herb species that have been successfully introduced to abandoned limestone quarry floors as seeds and plugs. Species identities (from left to right, top to bottom): *Allium cernuum, Campanula rotundifolia, Coreopsis lanceolata, Fragaria virginiana, Liatris cylindracea, Penstemon hirsutus, Rudbeckia hirta Solidago ptarmicoide.*

Amend the soil?

If appropriate species are selected then minimal soil remediation should be needed. However, in recently-mined sites (e.g. < 15 years old) soil may be extremely scarce or contaminated by limestone fines, requiring remediation. This situation can be improved by mixing existing substrates with an amendment that is 50% silica sand and 50% composted vegetation (by weight). Adding this to a depth of 2 cm encourages successful establishment of alvar plant communities following seed addition, though a polymer tackifier may be needed to help added substrates adhere in soil-free patches. Soil should NOT be treated with fertilizers, as this can make soils too nutrient-rich for alvar species and instead favour undesirable weed species.

Greenhouse-raised plugs of alvar herbs can consist of multiple intermixed species.

Introduce plant propagules

Moss introduction can be performed either in the spring, early summer or fall. To ensure rapid establishment of moss, propagules should be introduced to the area at a density ratio of approximately 1:10 to 1:15. In other words, one square meter of moss propagules treats ten to fifteen square metres of quarry floor.

Grasses and wildflowers are best introduced in the fall as seeds, to enable natural seed stratification over the winter and minimize the need for watering post-planting. Alternatively, if particular species or combinations are desired in specific locations, appropriate plugs for many species can be planted in spring. Broad coverage of vast areas with productive vegetation is unlikely and should not be expected; remember, even highly-diverse alvars feature large vegetation-free patches! Rather, the goal should be establishment of many low-cover and moderate-cover species in the patches they are best suited to. This is best achieved by adding diverse mixtures of seeds to diverse habitat patches (e.g. using multiple small plots) and not expecting everything to establish everywhere. Areas least-likely to experience wash-outs should be targeted, and seeds should be buried under 2-10 cm of soil where possible. Even mixing and seed distribution can be enhanced by combining seed material with sand.

Photos courtesy of Paul Richardson.

Examples of quarry floors successfully revegetated using multiple small-plot plantings of alvar herbs.

Post-planting management

To establish alvar mosses, adding an appropriate cover of mulch to planted patches of the quarry floor is essential. Mulch should be thin enough to let some light reach the moss propagules, and create an air layer immediately above the rock surface where temperature and moisture conditions will be more favourable to the plants. Wheat and spelt straw with long unbroken stems yield the best results, but other types of straw will work as well.

Minimal management should be required for alvar herbs. To create a self-sustaining restored ecosystem, it would be better to expend resources on planting trials aimed at finding species, species combinations, and initial conditions that work effectively, rather than intervening to keep struggling species alive through watering, mowing or weeding. Repeated additions of seeds and plugs over several years with minimal post-planting intervention should yield greater long-term success than a single planting followed by intensive gardening.

Communication of results and practices should be recorded and shared to aid in future rehabilitation projects.

Secure locations for planting (i.e. capable of trapping substrates and vegetation during floods) were created using a rock-hammer to break-up and remove large chunks of bedrock, then subsequently planted with alvar herbs.

This report is a summary from work completed by Ms. Suzanne Campeau of Bryophyta Technologies Inc., and Dr. Paul Richardson of the Cliff Ecology Research Group on the restoration of quarries to alvars. The full reports can be found at **www.toarc.com**.

How to Create Tallgrass Prairies on Post Sand Pit Mines

Ontario's tallgrass prairies are treeless habitats dominated by native grasses and wildflowers. Interspersed among Ontario's deciduous Carolinian forests, prairie vegetation is restricted to the dry conditions of well-drained, sandy soils. Currently, these ecosystems are disappearing as a result of urban sprawl, agriculture, invasive species colonization, and fire suppression. Sand plain prairie habitat supports a high biodiversity of regionally unique plants, invertebrates and animals. Habitat loss has elevated the status of many grassland species to provincially endangered or rare. Furthermore, sand plain prairies are home to a large number of rare grassland birds and insects. Increasing habitat quality and quantity through prairie restoration in southern Ontario will help ensure the survival of the ecosystem in addition to species-at-risk and increase biodiversity.

In 2010, a large-scale field study was established to test the best way to grow grassland plants in sand pits. It was found that tallgrass prairie plants are a viable option to recreate natural habitat in aggregate pits. Many of Ontario's prairie plants are adapted to dry, well-drained soil conditions characteristic of aggregate pits. Altering substrates with easy to apply soil amendments and biological inoculants will positively influence plant growth in these systems. This report is a summary from work completed by PhD candidate Brian Ohsowski from the University of British Columbia, Kelowna, British Columbia, Canada. The full report can be found at **www.toarc.com**.

Where is it suitable to rehabilitate to tallgrass prairies?

Historically, tallgrass prairies occurred sporadically throughout the southern part of Ontario with the most extensive areas in the southwest. One of the largest surviving bands of prairie vegetation in Ontario is found on the Norfolk Sand Plain. An evaluation of the extracted site should be completed to ensure that the site is in the historical range of habitat.

Seeds vs. Plant Plugs

Two viable options are available for prairie system rehabilitation: seed addition or plug addition. The decision to rehabilitate prairies with native plant seeds or plugs will be determined by desired speed of recovery and future maintenance considerations. Seeding the landscape is more cost effective but incorporates drawbacks such as:

(1) slower and less successful plant establishment,
(2) possible increased time to achieve rehabilitation certification,
(3) increased site maintenance requirements (i.e. reseeding applications), and
(4) possible increased influence of weedy, invasive plant species (i.e. herbicide applications may be necessary).

The up front cost of sowing native plant plugs (~65% higher than sowing seeds) and using ecological boosters in a rehabilitation project is initially more cost prohibitive. Despite this, plant plugs and ecological boosters are projected to accelerate project recovery time and increase prairie plant competitiveness thus reducing future site maintenance. In addition, the use of plant plugs can have dramatic growth results even after only one full growing season. Quick plant establishment is anticipated to accelerate soil stabilization by binding substrate with native plant roots and reducing laminar flow wind energy (i.e. reducing wind scouring). If the aggregate site needs to be restored quickly and effectively, sowing native plant plugs is the best option. However, integrating both planting approaches (i.e. plant plugs and seed) will optimize cost and more effectively establish the ecosystem.

Plant Species and Sourcing:

It is best to select a nursery for your restoration project about one year in advance to ensure that they are able to supply enough plant material. The nursery should specialize in native plant material that source local vegetation. Native plant nurseries also have expertise on selecting plants adaptable to the dry conditions of sand and gravel extraction sites soil conditions. It is also advised that a high diversity (10 – 30 species) of species be used that

include a mixture of warm season grasses, cool season grasses, legumes (i.e. nitrogen-fixing plants), and wild flowers. If using only plant plugs, they should be planted at an average rate of one plug per half square metre. However, the density may be adjusted based on the nursery recommendation. Seeding only should be at the rate recommended by the nursery. If using both plugs and seeds, the plugs should be planted at a rate of one plug per square metre and a high diversity of seeds should be sown among the plant plugs.

Mycorrhizal Inoculum:

Although tallgrass species depend on mycorrhizal fungi (fungal symbionts associating with the majority of terrestrial plant species), application of a commercial inoculum to plant plugs did not have a significant effect on growth or establishment. However, if seeds are used for the rehabilitation project, the application of mycorrhizal fungi inoculum as a seed coat at the time of sowing native plant seeds is recommended. *Rhizophagus irregularis* (a.k.a. *Glomus intraradices*) can be purchased as a seed coat powder from Myke® Pro (www.usemykepro.com) and applied at the rate suggested by the manufacturer.

Soils and Soil Amendments:

To establish tallgrass prairies, soils must be well-drained. It is not advised to add nitrogen to the soil when planting since prairie species compete better with weeds when the nitrogen is low. If stock-piled topsoil is recently excavated, topsoil may be re-incorporated into the pit floor substrate. It is not recommended to incorporate long-term storage stock piles of topsoil into the site as a high density of weedy plants will have developed on the stock-piled topsoil. Compost, an easily accessible soil amendment, will benefit substrate development and fertility. Incorporating compost into a restoration project can positively influence restoration outcomes.

Site Preparation:

The pit floor should be roughly graded flat to allow for easy planting. It is recommended that municipal compost be added to the top 10 cm of substrate at a rate of approximately 20T/ha – 30T/ha before planting and/ or sowing the site. The time between compost addition and planting should be minimized to avoid colonization of weedy species.

Site Planning:

Planting plugs and seeds should be timed with the seasons. Seeds can be distributed in early spring (March – April) or mid-fall (October –November). Plug planting should coincide with the rainy season after the threat of frost (April – early May). Plant plugs will initially need the high rainfall levels to establish a rooting system. Plant plugs require a couple of months to grow in the greenhouse. Contacting a nursery for seed source, growth timing, and material availability should be one of the initial steps in the planning process.

Tallgrass plant plugs were planted directly into sandy soils combined with municipal compost mixed into the top 10 cm of the soil.

Nursery stock of tallgrass plant plugs to be planted on the post extraction site.

PhD Candidate Brian Ohsowski stands beside a research plot 3 years post planting where tallgrass plant plugs were planted into sand mixed with municipal compost.

Naturally occurring tallgrass prairie in southern Ontario provides habitat to many species of plants and animals, including species at risk.

AGGREGATE RESOURCES TRUST

FINANCIAL STATEMENTS

For the year ended December 31, 2013

Independent Auditor's Report

TO THE TRUSTEE OF AGGREGATE RESOURCES TRUST:

We have audited the accompanying financial statements of Aggregate Resources Trust (the "Trust"), which comprise the statement of financial position as at December 31, 2013, and the statements of revenue and expenses and changes in fund balances, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Trust's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Trust's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Trust as at December 31, 2013 and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

BDO CANADA LLP

Chartered Accountants, Licensed Public Accountants

BURLINGTON, ONTARIO
FEBRUARY 26, 2014

AGGREGATE RESOURCES TRUST

Statement of Financial Position

	DECEMBER 31 2013 $	DECEMBER 31 2012 $
ASSETS		
CURRENT		
Cash	1,165,164	1,232,573
Short-term investments [*note 2*]	314,993	100,275
Due from Licensees and Permittees	180,590	260,996
HST recoverable	52,117	31,402
Due from the Ontario Stone, Sand & Gravel Association [note 5]	—	5,085
Interest and dividends declared receivable	29,500	27,894
Prepaid expenses	28,595	16,945
Total current assets	1,770,959	1,675,170
Investments [*note 3*]	18,284,034	16,234,247
Capital assets, net [*note 4*]	86,340	100,565
	20,141,333	18,009,982
LIABILITIES AND TRUST FUNDS		
CURRENT		
Accounts payable and accrued liabilities	247,324	173,321
Due to the Ontario Stone, Sand & Gravel Association [*note 5*]	1,539	277
Wayside permit deposits	13,105	21,880
Deferred Aggregate Resources Charges	39,263	71,969
Deferred lease costs	6,356	14,831
Due to Governments	317,139	415,780
Total current liabilities	624,726	698,058
TRUST FUNDS		
Rehabilitation Fund [*see schedules*]	17,030,637	14,762,188
Abandoned Pits and Quarries Rehabilitation Fund [*see schedules*]	2,485,970	2,549,736
Total Trust Funds	19,516,607	17,311,924
	20,141,333	18,009,982

See accompanying notes

On behalf of the Trust by The Ontario Aggregate Resources Corporation as Trustee:

Director

Director

AGGREGATE RESOURCES TRUST

Statement of Revenue and Expenses and Changes in Fund Balances

For the Year ended December 31	2013 $	2012 $
REVENUE		
Investment income *[note 3]*	1,265,312	822,955
Unrealized changes in fair value	2,183,143	1,100,820
Publications	2,174	2,529
Gain on disposal of capital assets	6,260	50
	3,456,889	1,926,354
EXPENSES		
Trustee's expenses *[note 7]*	1,130,442	1,115,825
Amortization	48,245	47,614
Investment management fees	126,955	120,854
	1,305,642	1,284,293
Excess of revenue over expenses before the following	2,151,247	642,061
Aggregate Resources Charges	18,919,106	19,304,236
Allocated to the Governments	(18,198,757)	(18,557,867)
Allocated to the Crown	(720,349)	(746,369)
Expenditures incurred in meeting the Trust purposes *[see schedules]*	(666,913)	(635,980)
Excess of revenue over expenses for the year	1,484,334	6,081
Trust Funds, beginning of year	17,311,924	16,559,474
Funds reinvested by the Crown	720,349	746,369
Trust Funds, end of year	19,516,607	17,311,924

See accompanying notes

AGGREGATE RESOURCES TRUST

Statement of Cash Flows

For the Year ended December 31	2013 $	2012 $
CASH FLOWS FROM OPERATING ACTIVITIES		
Excess of revenue over expenses for the year	1,484,334	6,081
Add (less) items not involving cash		
Amortization	48,245	47,614
Unrealized changes in fair values	(2,183,142)	(1,100,820)
Gain on disposal of capital assets	(6,260)	(50)
	(656,823)	(1,047,175)
Net change in non-cash working capital balances related to operations		
Due from Licensees and Permittees	80,406	(99,631)
HST recoverable	(20,715)	8,411
Due from Ontario Stone, Sand & Gravel Association	5,085	(5,085)
Interest and dividends declared receivable	(1,606)	3,380
Prepaid expenses	(11,650)	(1,112)
Accounts payable and accrued liabilities	74,003	(8,128)
Due to Ontario Stone, Sand & Gravel Association	1,262	(54,278)
Wayside permit deposits	(8,775)	—
Deferred Aggregate Resources Charges	(32,706)	30,189
Deferred lease costs	(8,475)	(8,475)
Due to Governments	(98,641)	(229,139)
Cash used in operating activities	(678,635)	(1,411,043)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of capital assets	(35,072)	(26,523)
Proceeds on disposal of capital assets	7,312	50
Purchase of short-term investments	(20,012,917)	(17,617,911)
Sale of short-term investments	19,798,199	17,783,192
Purchase of investments	(2,153,934)	(776,105)
Sale of investments	2,287,289	1,412,980
Cash provided by (used in) investing activities	(109,123)	775,683
CASH FLOWS FROM FINANCING ACTIVITY		
Funds reinvested by the Crown	720,349	746,369
Cash provided by financing activity	720,349	746,369
Net increase (decrease) in cash during the year	(67,409)	111,009
Cash, beginning of year	1,232,573	1,121,564
Cash, end of year	1,165,164	1,232,573

SUPPLEMENTAL CASH FLOW INFORMATION

For the Year ended December 31	2013 $	2012 $
Cash received from interest	397,943	385,358

See accompanying notes

AGGREGATE RESOURCES TRUST

Schedules of Statement of Revenue and Expenses and Changes in Fund Balances for the Aggregate Resources Fund, Rehabilitation Fund and Abandoned Pits and Quarries Rehabilitation Fund

For the Year ended December 31	2013			
	AGGREGATE RESOURCES FUND $	REHABILITATION FUND $	ABANDONED PITS AND QUARRIES REHABILITATION FUND $	TOTAL $
REVENUE				
Investment income *[note 3]*	—	1,096,989	168,323	1,265,312
Unrealized changes in fair value	—	1,856,763	326,380	2,183,143
Publications	—	139	2,035	2,174
Gain on disposal of capital assets	—	6,260	—	6,260
	—	2,960,151	496,738	3,456,889
EXPENSES				
Trustee's expenses *[note 7]*	—	511,118	619,324	1,130,442
Amortization	—	15,891	32,354	48,245
Investment management fees	—	107,470	19,485	126,955
	—	634,479	671,163	1,305,642
Excess (deficiency) of revenue over expenses before the following	—	2,325,672	(174,425)	2,151,247
Aggregate Resources Charges	18,919,106	—	—	18,919,106
Allocated to the Governments	(18,198,757)	—	—	(18,198,757)
Allocated to the Crown	(720,349)	—	—	(720,349)
Expenditures incurred in meeting the Trust purposes *[see schedules]*	—	(57,223)	(609,690)	(666,913)
Excess (deficiency) of revenue over expenses for the year	—	2,268,449	(784,115)	1,484,334
Trust Funds, beginning of year	—	14,762,188	2,549,736	17,311,924
Funds reinvested by the Crown	720,349	—	—	720,349
Interfund transfer	(720,349)	—	720,349	—
Trust Funds, end of year	—	17,030,637	2,485,970	19,516,607

See accompanying notes

AGGREGATE RESOURCES TRUST

Schedules of Statement of Revenue and Expenses and Changes in Fund Balances for the Aggregate Resources Fund, Rehabilitation Fund and Abandoned Pits and Quarries Rehabilitation Fund

For the Year ended December 31	2012			
	AGGREGATE RESOURCES FUND $	REHABILITATION FUND $	ABANDONED PITS AND QUARRIES REHABILITATION FUND $	TOTAL $
REVENUE				
Investment income [*note 3*]	—	711,521	111,434	822,955
Unrealized changes in fair value	—	927,771	173,049	1,100,820
Publications	—	361	2,168	2,529
Gain on disposal of capital assets	—	50	—	50
	—	1,639,703	286,651	1,926,354
EXPENSES				
Trustee's expenses [*note 7*]	—	515,018	600,807	1,115,825
Amortization	—	12,440	35,174	47,614
Investment management fees	—	100,906	19,948	120,854
	—	628,364	655,929	1,284,293
Excess (deficiency) of revenue over expenses before the following	—	1,011,339	(369,278)	642,061
Aggregate Resources Charges	19,304,236	—	—	19,304,236
Allocated to the Governments	(18,557,867)	—	—	(18,557,867)
Allocated to the Crown	(746,369)	—	—	(746,369)
Expenditures incurred in meeting the Trust purposes [see schedules]	—	(86,754)	(549,226)	(635,980)
Excess (deficiency) of revenue over expenses for the year	—	924,585	(918,504)	6,081
Trust Funds, beginning of year	—	13,837,603	2,721,871	16,559,474
Funds reinvested by the Crown	746,369	—	—	746,369
Interfund transfer	(746,369)	—	746,369	—
Trust Funds, end of year	—	14,762,188	2,549,736	17,311,924

See accompanying notes

AGGREGATE RESOURCES TRUST

Schedules of Rehabilitation Costs for the Rehabilitation Fund

For the Year ended December 31 2013

PROJECT NUMBER	PROJECT NAME	PAID OR PAYABLE $
13-001	Levesque Pit, District of Timiskaming	19,520
13-002	Neuman Pit, Hastings County	18,583
	Education	
	Student Rehabilitation Design Competition	11,155
	Rehabilitation Tour Simcoe County & surrounding area	1,500
	Tendering, consulting and other	6,465
		57,223

See accompanying notes

For the Year ended December 31 2012

PROJECT NUMBER	PROJECT NAME	PAID OR PAYABLE $
12-001A	McBride Pit, Renfrew County	39,240
12-001B	Stone Pit, Renfrew County	27,852
13-001	Levesque Pit, District of Timiskaming	1,332
	Education	
	Student Rehabilitation Design Competition	12,000
	Rehabilitation Tour County of Brant & surrounding area	2,685
	Tendering, consulting and other	3,645
		86,754

See accompanying notes

AGGREGATE RESOURCES TRUST

Schedule of Rehabilitation Costs for the Abandoned Pits and Quarries Rehabilitation Fund

For the Year ended December 31 — 2013

PROJECT NUMBER	PROJECT NAME	PAID OR PAYABLE /(RECOVERED) $
11-08	Myles Pit, Bruce County	4,563
12-04A	Schut Pit, Northumberland County	462
12-04B	Cook Pit, Northumberland County	410
12-04D	Self Pit, Northumberland County	7,319
12-04E	Scott Pit, Northumberland County	1,186
12-07	Sheppard Pit, Northumberland County	2,771
12-09C	McNichol Pit, Northumberland County	331
13-01	Timmings Pit, Wellington County	62,533
13-02A	Zelasko Pit, Wellington County	19,807
13-02B	Hartung Pit, Wellington County	57,010
13-03A	Weber Pit, Wellington County	13,539
13-03B	GRCA Redstone Pit, Wellington County	3,645
13-03C	GRCA Ariss Pit, Wellington County	3,507
13-03D	Bowier Pit, Wellington County	34,585
13-04	Arnold Pit, Wellington County	38,086
13-05A	G. Martin Pit, Wellington County	13,835
13-05B	L. Martin Pit, Wellington County	11,226
13-05C	Sherman Pit, Wellington County	21,725
13-06A	Hessels Pit, Wellington County	6,400
13-06B	GRCA Neumann Pit, Wellington County	11,419
13-06C	Brohman Pit, Wellington County	5,940
13-06D	J. Martin Pit, Wellington County	12,350
13-07	Windsor Feminist Theatre Quarry, Essex County	8,916
13-08	Guy Pit, Durham County	24,673
13-09A	Senn Pit, Durham County	7,373
13-09B	Swindells Pit, Durham County	11,673
13-09C	LeBlanc Pit, Durham County	13,673
13-10A	Warriner Pit, Durham County	5,506
13-10B	Piney Pit, Durham County	8,693
13-10C	Coxworth Pit, Durham County	7,433
13-10D	Ross Pit, Durham County	7,814
13-11A	Kemp Pit, Durham County	5,173
13-11B	Davidson Pit, Durham County	10,173
13-11C	Woodley Pit, Durham County	8,400
13-12	Halminem Pit, Durham County	22,428

AGGREGATE RESOURCES TRUST

For the Year ended December 31 — 2013

PROJECT NUMBER	PROJECT NAME	PAID OR PAYABLE /(RECOVERED) $
	RESEARCH COSTS	
	Dr. Klironomos – Fungal & Soil Ecology - Native prairie plant response to mycorrhizal inoculation and soil carbon amendments	12,750
	Dr. Richardson – Determining the time span and ecological conditions necessary for afforested environments to support older-growth understorey communities	76,425
	Recoveries NSERC & Centre for Ecosystem Resilience & Adaptation	(13,474)
	TOARC Internal Research on Agricultural Rehabilitation	56,418
	TENDERING, CONSULTING AND OTHER	2,994
		609,690

See accompanying notes

AGGREGATE RESOURCES TRUST

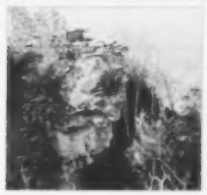
Schedule of Rehabilitation Costs for the Abandoned Pits and Quarries Rehabilitation Fund

For the Year ended December 31 — 2012

PROJECT NUMBER	PROJECT NAME	PAID OR PAYABLE /(RECOVERED) $
08-24	Maree Pit, Grey County	2,000
11-07A	Halbert Pit, Dufferin County	10,740
11-08	Myles Pit, Bruce County	1,088
11-09	Molro Pit, Huron County	1,200
11-11B	Hallman Pit, Huron County	255
11-12B	Papple Pit, Huron County	7,730
11-13A	Ryan Pit, Huron County	8,718
12-01	Smeekens Pit, Lambton County	2,620
12-02A	Thompson Pit, Huron County	1,994
12-02C	Pfeffer Pit, Huron County	265
12-03	Dufferin-Northern Peel Anglers' & Hunters' Association Pit, Huron County	5,512
12-04A	Schut Pit, Northhumberland County	19,671
12-04B	Cook Pit, Northhumberland County	11,131
12-04C	Linton Pit, Northhumberland County	6,056
12-04D	Self Pit, Northhumberland County	10,848
12-04E	Scott Pit, Northhumberland County	8,645
12-05	Ward Pit, Northhumberland County	59,540
12-06A	Moroz Pit, Northhumberland County	8,763
12-06B	Carlen Pit, Northhumberland County	8,026
12-07	Sheppard Pit, Northhumberland County	24,387
12-08	Hutchinson Pit, Northhumberland County	54,000
12-09A	England Pit, Northhumberland County	11,787
12-09B	England Pit, Northhumberland County	8,542
12-09C	McNichol Pit, Northhumberland County	4,309
12-10A	Ryan Pit, Northhumberland County	6,819
12-10B	Walsh Pit, Northhumberland County	12,414
12-10C	Coyne Pit, Northhumberland County	16,065
12-11	Halton Conservation Authority Quarry, Region Municipality of Halton	15,500
12-12	Bruno Pit, The District of Thunder Bay	19,600
12-13	Buchanan Pit, The District of Thunder Bay	23,450
12-14A	Baziuk Quarry, The District of Thunder Bay	12,200
12-14B	Baziuk Quarry, The District of Thunder Bay	12,200
12-15A	Tabor Quarry, The District of Thunder Bay	6,800
12-15B	Connor Quarry, The District of Thunder Bay	6,800
12-16	Gallo Quarry, The District of Thunder Bay	16,480
12-17	Mechis Quarry, The District of Thunder Bay	32,820
12-18	Tabor Quarry, The District of Thunder Bay	4,500

AGGREGATE RESOURCES TRUST

Schedule of Rehabilitation Costs for the Abandoned Pits and Quarries Rehabilitation Fund



For the Year ended December 31 — 2012

PROJECT NUMBER	PROJECT NAME	PAID OR PAYABLE /(RECOVERED) $
	RESEARCH COSTS	
	Bryophyta Technologies – Establishing Alvar mosses on Quarry floors	7,262
	Dr. Klironomos – Fungal & Soil Ecology - Native prairie plant response to mycorrhizal inoculation and soil carbon amendments	13,750
	Dr. Richardson – Determining the time span and ecological conditions necessary for afforested environments to support older-growth understorey communities	92,627
	Recoveries NSERC & Centre for Ecosystem Resilience & Adaptation	(30,000)
	TENDERING, CONSULTING AND OTHER	2,112
		549,226

See accompanying notes

December 31, 2013

1 NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Formation and Nature of Trust

Aggregate Resources Trust [the "Trust"] was settled by Her Majesty the Queen in Right of the Province of Ontario [the "Crown"] as represented by the Minister of Natural Resources [the "Minister"] for the Province of Ontario pursuant to Section 6.1(1) of the Aggregate Resources Act, R.S.O. 1990, Chap. A.8 as amended [the "Act"]. The Minister entered into a Trust Indenture dated June 27, 1997 [the "Trust Indenture"] with The Ontario Aggregate Resources Corporation ["TOARC"] appointing TOARC as Trustee of the Trust.

The Trust's goals are:

[a] the rehabilitation of land for which a licence or permit has been revoked and for which final rehabilitation has not been completed; [b] the rehabilitation of abandoned pits and quarries, including surveys and studies respecting their location and condition; [c] research on aggregate resource management, including rehabilitation; [d] making payments to the Crown and to regional municipalities, counties and local municipalities in accordance with regulations made pursuant to the Act; [e] the management of the Abandoned Pits and Quarries Rehabilitation Fund; and [f] such other purposes as may be provided for by or pursuant to Section 6.1(2)5 of the Act.

In 1999 the Trust's purposes were expanded by amendment to the Trust Indenture to include:

[a] "the education and training of persons engaged in or interested in the management of the aggregate resources of Ontario, the operation of pits or quarries, or the rehabilitation of land from which aggregate has been excavated; and

[b] the gathering, publishing and dissemination of information relating to the management of the aggregate resources of Ontario, the control and regulation of aggregate operations and the rehabilitation of land from which aggregate has been excavated."

In accordance with the Trust Indenture, TOARC administers the Trust which consists of three funds: the Aggregate Resources Fund, the Rehabilitation Fund and the Abandoned Pits and Quarries Rehabilitation Fund. TOARC is a mere custodian of the assets of the Trust and all expenditures made by TOARC are expenditures of the Trust.

Prior to the creation of the Trust, the Trust's goals were pursued by the Minister and, separately, the Ontario Stone, Sand & Gravel Association [the "OSSGA"] formerly The Aggregate Producers' Association of Ontario [the "APAO"]. Upon the creation of the Trust, rehabilitation security deposits held by the Crown, as represented by the Minister, were to be transferred to the Trust. In addition, the Crown directed the OSSGA to transfer, on behalf of the Crown, the Abandoned Pits and Quarries Rehabilitation Fund to the Trust. By December 31, 1999, the Minister and the OSSGA had transferred $59,793,446 and $933,485, respectively, to the Trust.

Pursuant to the Trust Indenture, TOARC "shall pay and discharge expenses properly incurred by it in carrying out and fulfilling the Trust purposes and the administration of the Trust . . ." [Section 7.02].

December 31, 2013

1 NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (Continued)

The Aggregate Resources Fund is for the collection of the annual licence and permit fees, royalties, and wayside permit fees [aggregate resources charges] collected on behalf of the Minister. Effective for the 2007 production year the annual licence fee increased from $0.06 per tonne to $0.115 per tonne. The licence fees are due by March 15 of the following year, and are disbursed within six months of receipt. The fees are disbursed as follows: [a] $0.06 to the lower tier municipality, [b] $0.015 to the upper tier municipality, [c] $0.035 to the Crown, collectively [the "Governments"] and [d] $0.005 to the Trust. Minimum annual fees were increased effective for the 2007 production year:

- a Class A licence from $200 to $400 or $0.115 per tonne whichever is greater;
- a Class B licence from $100 to $200 or $0.115 per tonne whichever is greater;
- the minimum wayside fee from $100 to $400 or $0.115 per tonne whichever is greater;
- the annual aggregate permit fee from $100 to $200;
  and
- the minimum royalty rate for aggregate extracted on Crown land from $0.25 to $0.50 per tonne.

For production prior to 2007 all aggregate resources charges remain at the old fee schedule with the $0.06 licence fee being disbursed as follows: [a] $0.04 to the lower tier municipality, [b] $0.005 to the upper tier municipality, [c] $0.01 to the Crown, collectively [the "Governments"] and [d] $0.005 to the Trust.

The funds reinvested by the Crown to the Trust from the Aggregate Resources Fund will be transferred within the Trust and used for the Rehabilitation Fund and the Abandoned Pits and Quarries Rehabilitation Fund. In addition, the Trust collects the royalty payments and annual fees related to aggregate permits and also disburses the funds to the Crown within six months of receipt.

The Rehabilitation Fund represents the rehabilitation security deposits, contributed by licensees and permittees, held by the Crown and, in accordance with the Trust Indenture, transferred to the Trust. TOARC has been directed by the Minister to refund approximately 3,000 individual licensee and permittee accounts based on the formula of retaining $500 per hectare disbursed on licences and 20% of the deposit amount for aggregate permits. As a result, the Trust has refunded approximately $48.6 million as per the Crown's directions. The balance of funds will be used to ensure the rehabilitation of land where licences and/or permits have been revoked and final rehabilitation has not been completed.

The Abandoned Pits and Quarries Rehabilitation Fund is for the rehabilitation of abandoned sites and related research. Abandoned sites are pits and quarries for which a licence or permit was never in force at any time after December 31, 1989.

The Trust's expenses [or Trustee's expenses] are the amounts paid pursuant to Article 7.02 of the Trust Indenture.

December 31, 2013

1 NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (Continued)

Pursuant to Section 4.01 of the Trust Indenture, the Trust's assets and the income and gains derived therefrom are property belonging to the Province of Ontario within the meaning of Section 125 of the Constitution Act, 1867 and, by reason of Section 7.01 of the Trust Indenture, the amounts paid by the Trustee pursuant to Article 7 are paid to or for the benefit of the Crown.

Basis of Accounting

The financial statements of the Trust have been prepared in accordance with Canadian accounting standards for not-for-profit organizations.

Use of Estimates

The preparation of financial statements in accordance with Canadian accounting standards for not-for-profit organizations requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from management's best estimates as additional information becomes available in the future. The financial statements have, in management's opinion, been properly prepared using careful judgment within reasonable limits of materiality and within the framework of the accounting policies of the Trust.

Aggregate Resources Charges

Aggregate resources charges collected on behalf of the Minister are recorded upon receipt of a tonnage report from licensees and permittees. Aggregate resources charges are based on the tonnage produced in the preceding period by the licensees and permittees as reported by the licensees and permittees. If there is no production in the preceding period, an annual fee is recognized for permittees.

Deferred Aggregate Resources Charges represents prepayments and overpayments of fees charged to licensees and permittees.

Capital Assets

Capital assets are recorded at cost less accumulated amortization. Amortization is recorded to write off the cost of capital assets over their estimated useful lives on a straight-line basis as follows:

Computer equipment and software	3 to 5 years
Furniture and fixtures	5 years
Leasehold improvements	5 years
Vehicle	3 years

Deferred Lease Costs

Deferred lease costs represent leasehold improvements that are being reimbursed by the landlord and are being amortized over the term of the lease.

December 31, 2013

1 NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (Continued)

Financial Instruments

Financial instruments are recorded at fair value when acquired or issued. In subsequent periods, equities and pooled funds traded in an active market are reported at fair value, with realized gains and losses and unrealized changes in fair values of investments recorded in the Statement of Revenue and Expenses and Changes in Fund Balances under investment income and unrealized changes in fair value respectively. In addition, all promissory notes, treasury bills and bonds have been designated to be in the fair value category, with realized gains and losses and unrealized changes in fair values of investments recorded in the Statement of Revenue and Expenses and Changes in Fund Balances under investment income and unrealized changes in fair value respectively. All other financial instruments are reported at cost or amortized cost less impairment, if applicable. Financial assets are tested for impairment when changes in circumstances indicate the asset could be impaired. Transaction costs on the acquisition, sale or issue of financial instruments are included in the Statement of Revenue and Expenses and Changes in Fund Balances under investment income for those items remeasured at fair value at each statement of financial position date and charged to the financial instrument for those measured at amortized cost.

Revenue Recognition

Investment income is recognized in the period in which it is earned.

Foreign Currency Translation

Foreign currency accounts are translated into Canadian dollars as follows:

Foreign currency assets and liabilities are translated into Canadian dollars by the use of the exchange rate prevailing at the yearend date for monetary items and at exchange rates prevailing at the transaction date for non-monetary items. The resulting foreign exchange gains and losses are included in investment income in the current period.

December 31, 2013

2 SHORT-TERM INVESTMENTS

SHORT-TERM INVESTMENTS CONSIST OF:

	2013 $	2012 $
Province of Quebec Promissory Note, bears interest at 0.90% per annum, matures January 09, 2014	99,871	—
Government of Canada Treasury Bill, bears interest at 0.90% per annum, matures January 10, 2014	144,864	—
Province of Ontario Treasury Bill, bears interest at 0.90% per annum, matures January 22, 2014	49,901	—
Shaw Communications Bond, bearing interest at 6.50% per annum, matures June 2, 2014	20,357	—
Province of Nova Scotia Bond, bears interest at 4.50% per annum, matured June 1, 2013	—	50,691
Province of Quebec Real Return Bond, bears interest at 3.30% per annum, matured December 31, 2013	—	49,584
	314,993	100,275

3 INVESTMENTS

INVESTMENTS CONSIST OF THE FOLLOWING:

	2013		2012	
	FAIR VALUE $	COST $	FAIR VALUE $	COST $
Bonds				
Government of Canada and Agencies	2,368,101	2,308,590	2,173,396	2,047,104
Crown Corporations	209,356	207,836	260,184	257,103
Corporate	422,020	412,110	408,072	385,099
Canadian Equities	1,878,054	1,266,923	1,517,014	1,196,071
Foreign Equities	4,199,671	3,618,863	3,695,942	4,214,869
Pooled Funds	9,206,832	7,477,484	8,179,639	7,327,693
	18,284,034	15,291,806	16,234,247	15,427,939

The Government of Canada and Agencies bonds bear interest at rates ranging from 1.385% to 10.95% per annum [2012 – 1.409% to 10.95%] with maturity dates ranging from April 19, 2016 to June 2, 2022.

The Crown Corporations bonds bear interest at rates ranging from 1.385% to 4.640% per annum [2012 – 1.439% to 4.640%] with maturity dates ranging from March 3, 2016 to September 15, 2017.

The Corporate bonds bear interest at rates ranging from 2.275% to 6.650% per annum [2012 – 2.861% to 6.650%] with maturity dates ranging from March 12, 2015 to November 16, 2020.

December 31, 2013

3 INVESTMENTS (continued)

INVESTMENT INCOME IS BROKEN DOWN AS FOLLOWS:

	2013 $	2012 $
Interest income	397,869	382,758
Dividends	265,592	272,929
Realized capital gains (net)	597,168	174,420
Foreign exchange gains (losses) (net)	4,563	(7,192)
Other income	120	40
	1,265,312	822,955

Investment income of the Rehabilitation Fund includes interest earned on Aggregate Resources Charges collected on behalf of the Minister of $147,713 (2012 - $147,937).

4 CAPITAL ASSETS

CAPITAL ASSETS CONSIST OF THE FOLLOWING:

	2013			2012		
	COST $	ACCUMULATED AMORTIZATION $	NET BOOK VALUE $	COST $	ACCUMULATED AMORTIZATION $	NET BOOK VALUE $
Computer equipment and software	238,132	166,773	71,359	241,815	177,371	64,444
Furniture and fixtures	103,286	92,687	10,599	117,519	102,258	15,261
Leasehold improvements	46,700	42,318	4,382	46,700	33,443	13,257
Vehicle	34,215	34,215	—	81,770	74,167	7,603
	422,333	335,993	86,340	487,804	387,239	100,565

5 DUE FROM/TO THE ONTARIO STONE, SAND & GRAVEL ASSOCIATION

Amounts due from/to the Association are unsecured, non-interest bearing and are due on demand. These transactions are in the normal course of operations and are measured at the exchange value (the amount of consideration established and agreed to by the related parties).

6 COMMITMENTS

The Trust has entered into a number of Research Funding Agreements. The future annual payments, in total and over the next two years, are as follows:

	$
2014	$137,190
2015	$28,216
	$165,406

December 31, 2013

7 TRUSTEE'S EXPENSES

For the Year ended December 31	2013		
	REHABILITATION FUND $	ABANDONED PITS AND QUARRIES REHABILITATION FUND $	TOTAL $
EXPENSES			
Salaries and employee benefits	285,055	458,258	743,313
Board expenses	2,375	2,375	4,750
Professional fees	93,487	36,820	130,307
Data processing	14,325	18,003	32,328
Travel	32,286	48,055	80,341
Communication	26,081	23,865	49,946
Office	14,981	7,310	22,291
Office lease, taxes and maintenance	39,402	23,077	62,479
Insurance	3,126	1,561	4,687
Trustee Expenses	511,118	619,324	1,130,442

For the Year ended December 31	2012		
	REHABILITATION FUND $	ABANDONED PITS AND QUARRIES REHABILITATION FUND $	TOTAL $
EXPENSES			
Salaries and employee benefits	303,015	424,829	727,844
Board expenses	2,917	2,917	5,834
Professional fees	84,196	24,806	109,002
Data processing	10,798	25,331	36,129
Travel	29,520	64,925	94,445
Communication	28,701	26,540	55,241
Office	14,278	7,596	21,874
Office lease, taxes and maintenance	38,467	22,302	60,769
Insurance	3,126	1,561	4,687
Trustee Expenses	515,018	600,807	1,115,825

December 31, 2013

8 LEASE COMMITMENTS

The future minimum annual lease payments are as follows:

	$
2014	$53,710

9 FINANCIAL INSTRUMENTS RISK

Credit Risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. The Trust is exposed to credit risk resulting from the possibility that a customer or counter party to a financial instrument defaults on their financial obligations. The Trust is subject to credit risk through its due from licensees and permittees and interest and dividends declared receivable. This risk has not changed from the prior year.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Trust is exposed to interest rate risk arising from the possibility that changes in interest rates will affect the value of fixed income denominated investments. This risk has not changed from the prior year.

Liquidity Risk

Liquidity risk is the risk that the Trust encounters difficulty in meeting its obligations associated with its financial liabilities. Liquidity risk includes the risk that, as a result of operational liquidity requirements, the Trust will not have sufficient funds to settle a transaction on the due date; will be forced to sell financial assets at a value which is less than what they are worth; or may be unable to settle or recover a financial asset. Liquidity risk arises from the Trust's accounts payable and accrued liabilities, due to the Ontario, Stone, Sand & Gravel Association and due to Governments. This risk has not changed from the prior year.

Market Risk

The Trust is subject to market risk with respect to its investments. The values of these investments will fluctuate as a result of changes in market prices or other factors affecting the value of the investments. This risk has not changed from the prior year.

Independent Auditor's Report

TO THE SHAREHOLDER OF THE ONTARIO AGGREGATE RESOURCES CORPORATION:

We have audited the accompanying financial statements of The Ontario Aggregate Resources Corporation (the "Corporation"), which comprise the balance sheet as at December 31, 2013 and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for private enterprises, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Corporation's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of The Ontario Aggregate Resources Corporation as at December 31, 2013 and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for private enterprises.

BDO CANADA LLP

Chartered Accountants, Licensed Public Accountants

BURLINGTON, ONTARIO
FEBRUARY 26, 2014

THE ONTARIO AGGREGATE RESOURCES CORPORATION

Balance Sheet

December 31	2013 $	2012 $
ASSET		
Cash	1	1
SHAREHOLDER'S EQUITY		
Share capital		
Authorized and issued, 1 common share	1	1
Retained earnings	—	—
Total shareholder's equity	1	1

See accompanying note

On behalf of the Board:

Director

Director

December 31, 2013

1 NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Formation and Nature of Corporation

The Ontario Aggregate Resources Corporation [the "Corporation"] was incorporated on February 20, 1997. The Corporation's sole shareholder is the Ontario Stone, Sand & Gravel Association [the "OSSGA"] (formerly The Aggregate Producers' Association of Ontario [the "APAO"]), a not-for-profit organization. The Corporation's sole purpose is to act as Trustee of the Aggregate Resources Trust [the "Trust"]. On June 27, 1997, the Corporation and Her Majesty the Queen in Right of the Province of Ontario [the "Crown"], as represented by the Minister of Natural Resources [the "Minister"], entered into a Trust Indenture, appointing the Corporation as Trustee of the Trust.

In accordance with the Indenture Agreement, the Corporation manages the administrative expenses as Trustee of the Trust which consists of three funds: the Aggregate Resources Fund, the Rehabilitation Fund and the Abandoned Pits and Quarries Rehabilitation Fund.

The Trust's assets managed by the Corporation, amounting to approximately $19.5 million, are not included in the accompanying balance sheet. The beneficial owner of the Trust's assets is the Crown.

The financial statements do not include an income statement or statement of cash flows as there is no activity in the Corporation.

Basis of Accounting

The financial statements of the Corporation have been prepared in accordance with Canadian accounting standards for private enterprises.

Production Reporting – Audit Program

TOARC, on behalf of the Trust, initiated an audit program in 2000 to monitor the completeness and accuracy of production reports submitted by licensees and permittees. The program is designed to educate licence and permit holders with respect to their obligations for record keeping under the Aggregate Resources Act in addition to assuring that aggregate production is being reported properly. The audit program is currently being reviewed by the TOARC Board regarding the selection process.

Since the inception of the program, TOARC has audited 616 clients covering 1,954 licences and permits resulting in an additional $891,877 of net aggregate resource fees collected.

Revoked Licences and Permits

Under Subsection (v) (i) of the Trust Indenture, TOARC has the responsibility for "the rehabilitation of land for which a licence or permit has been revoked and for which final rehabilitation has not been completed". Since inception of the Trust, 96 licences and 214 permits have been revoked. In the case of licences, 66 have been rehabilitated or the files have been closed for other reasons. In the case of permits, 121 have been rehabilitated or closed for other reasons. To date the Trust has expended $774,546 in net direct costs for rehabilitation of revoked sites.

Professional Assistance

BANKING INSTITUTION
Scotiabank

INVESTMENT ADVISORS
T.E. Investment Counsel Inc.

INVESTMENT MANAGERS
Burgundy Asset Management Ltd.
Letko Brosseau & Associates Inc.

AUDITORS
BDO Canada LLP

LEGAL COUNSEL
Blake, Cassels & Graydon LLP

SHAREHOLDER
Ontario Stone, Sand & Gravel Association